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### Testing for genital mycoplasmas and ureaplasmas in reproductive age women

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## **Testing for genital mycoplasmas and ureaplasmas**



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Under review

Dear Editor,

The paper by Silva et al. provides food for thought (1). We appreciate the effort made in studying 612 female volunteers but question several aspects. The authors discuss bacterial vaginosis (BV) but it seems that they did not determine its existence or prevalence. This is a flaw because the organisms of *Mycoplasma hominis* and the *Ureaplasma* spp. are known to multiply several thousand-fold in BV and may affect and/or be responsible for some of the results presented. Furthermore, the data are qualitative and not quantitative, so that the existence of large numbers that might suggest pathogenic potential or give a clue to the diagnosis of BV cannot be provided. Of greater worry, however, is the conclusion by the authors that "testing for genital infections in reproductive-age women is of great significance, to identify the simultaneous presence of different microorganisms and to inform appropriate management in specific situations"--and by implication, genital mycoplasmas and ureaplasmas. Asymptomatic carriage of these microorganisms is commonly found without disease developing in the majority of women, and treatment of *M. hominis* and/or ureaplasma-positive individuals has not been shown to be of benefit (2). Over-testing and over treatment may induce patient alarm and serious costs to individuals and society. A recent position statement from the European STI Guidelines Editorial Board specifically reviews cervicitis, PID,

ectopic pregnancy and infertility and concludes that there is no current evidence that more good than harm is done by detecting and subsequently treating *M.hominis*, *Ureaplasma parvum* and *U.urealyticum* (2).

Routine testing of asymptomatic or symptomatic women is not recommended. Indeed, extensive testing for these bacteria, their detection and subsequent antimicrobial treatment may result in antimicrobial resistance in them as well as in 'true' STI agents, such as *Neisseria gonorrhoeae* and *Mycoplasma genitalium*, with substantial economic costs for society and individuals, particularly women (2,3). It should be emphasized that if the occasion arises, physicians faced with a positive result for *M.hominis* or the *Ureaplasma* spp. should not flinch; antimicrobial treatment is not an option.

We do agree with Silva et al. that further studies are needed for better clarification of the clinical significance of these microorganisms, on acquisition of other STIs and their impact on pregnancy outcomes. It is important that such studies control for age, sexual behaviour (number and change of sexual partners), use quantitative molecular diagnostic tests determining bacterial load, bacterial vaginosis and microscopy to evaluate inflammation (polymorphonuclear leucocytes), distinguish *U.urealyticum* and *U.parvum* and

exclude traditional sexually transmitted organisms such as *N.gonorrhoeae*, *C.trachomatis*, *M.genitalium* and trichomoniasis (2). It may not be possible to fulfill Koch's original postulates for proving a bacterium is the cause of a disease, but satisfying other criteria that have been suggested (4) should be within grasp. Evolving our expert guidance as to when tests become clinically useful, as well as for research purposes is a key responsibility. The public now have direct access to commercial tests for genital mollicutes, so our guidance can help the public and doctors alike. We believe that guiding what not to test for is as important as what to test for. These are crucial matters that cannot be tackled in a trivial way, especially when emerging antibiotic resistance is a critical risk.

1. Genital mycoplasmas and ureaplasmas in cervicovaginal self-collected samples of reproductive-age women: prevalence and risk factors Jani Silva, Fátima Cerqueira, Ana Luísa Teixeira,  
...<https://doi.org/10.1177/0956462418774209>

2. Horner P, Donders G, Cusini M, Gomberg M, Jensen JS, Unemo M: Should we be testing for urogenital *Mycoplasma hominis*, *Ureaplasma parvum* and

Ureaplasma urealyticum in men and women? - a position statement from the European STI Guidelines Editorial Board. J Eur Acad Dermatol Venereol 2018. doi: 10.1111/jdv.15146. [Epub ahead of print]

3. Unemo M, Jensen JS: Antimicrobial-resistant sexually transmitted infections: gonorrhoea and Mycoplasma genitalium. Nature reviews Urology 2017, 14(3):139-152.

4. Taylor-Robinson D. The role of mycoplasmas in non-gonococcal urethritis: a review. Yale J Biol Med. 1983, 56: 537-543.

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